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ABSTRACT

The purpose of this handbook is to present in a simple form the processes and procedures involved in preparing research and development projects in vocational-technical education in the State of Tennessee. It was prepared in conjunction with the Research Coordinating Unit (RCU) and the division of Vocational-Technical Education, State Department of Education. The handbook deals with the consultation services of the RCU, brief descriptions of the kinds of projects, Federal and State standards for projects, how to plan and write the project proposal, self-evaluation of the project proposal, specifications for submitting the project proposal for funding, and conducting the project. Included are two appendixes (a cover page for a proposal and the budget format) and a list of the Tennessee RCU staff. (BP)

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Research Series No. 40

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Preparing
RESEARCH AND DEVELOPMENT PROPOSALS
for
Vocational-Technical Education

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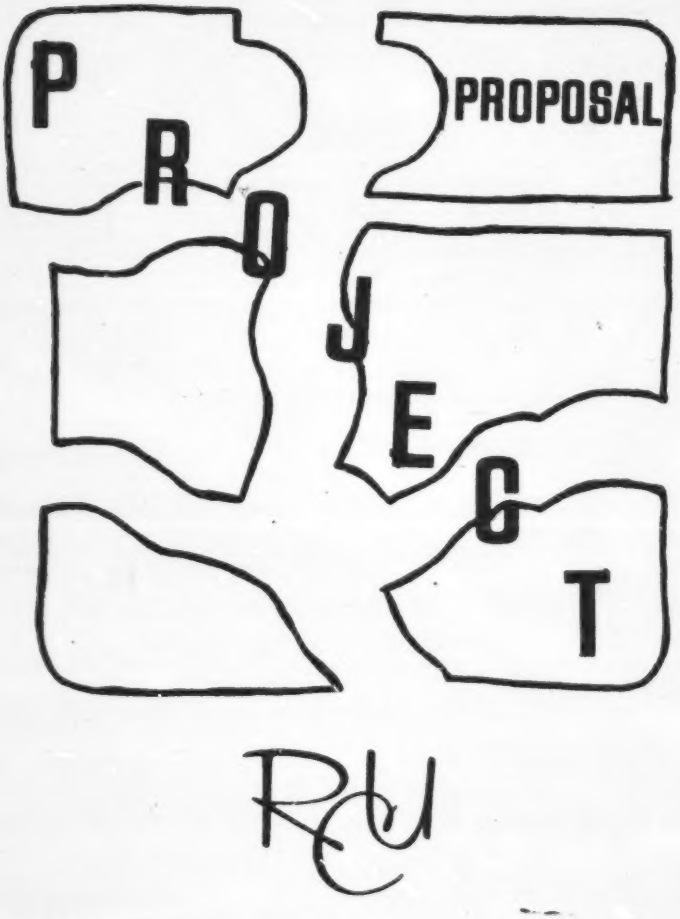

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Research Series #40

PREPARING
RESEARCH AND DEVELOPMENT PROPOSALS
FOR
VOCATIONAL-TECHNICAL EDUCATION

BY

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September 1973

FOREWORD

Funds have been and continue to be available at the federal and state level to encourage and support research and development activities in vocational-technical education. These activities may be specifically for any of the program areas of vocational-technical education -- agriculture, business, distributive, health, home economics, or trade and industrial -- or may combine aspects of several program areas. The distribution and use of the state's allocation of these funds is administered by the Research Coordinating Unit (RCU) and the Division of Vocational-Technical Education, State Department of Education.

The purpose of this handbook is to present in a simple form the processes and procedures involved in preparing research and development projects. It is hoped that the handbook will be useful to the expert as well as the inexperienced researcher and that the principles of project preparation will generally apply to all program areas in vocational-technical education.

This handbook deals only with preparing research and development projects in vocational-technical education. A related publication on writing final reports of research and development projects in vocational-technical education is available from the RCU.

Vocational Educators are indebted to the scholarly effort of Dr. Edwin Lamberth for his preparation of this publication.

Garry R. Bice
Director
Research Coordinating Unit

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INTRODUCTION

The Research Coordinating Unit (RCU) is looking for fresh, new, innovative ideas and projects that attempt to apply educational research findings. The RCU encourages vocational instructors, teacher - coordinators, guidance counselors, school administrators, graduate students, university and college faculty members, and staff members of the State Division of Vocational-Technical Education to develop and submit ideas for research that will improve vocational-technical education in Tennessee.

RCU SERVICES

The RCU staff is available to provide consultation services on the design of research and development studies related to vocational-technical education, to review and advise on research in Tennessee, to assist in securing funds for conducting vocational-technical education research, to coordinate research and development activities to avoid duplication of effort, and to disseminate research information on vocational-technical education.

The services of the RCU are available to all persons interested in the implementation and improvement of vocational-technical education research regardless of whether funding is necessary for the success of the project.

KINDS OF PROJECTS

A brief description of the categories of research and development projects that may qualify for reimbursement follows.

This description may assist the prospective applicant with the planning and self-evaluation of whether or not a particular idea may be fundable under provisions of the vocational education acts and amendments. Under some circumstances, a given project may possess the elements of more than a single category. Projects can generally be divided into the following categories:

Experimental. An experimental research project is concerned with testing the relationship between two or more variables according to a previously stated hypothesis(es) or question(s).

Developmental. A developmental project is distinguished by the emphasis upon a product as a major outcome of the project. The product may be in the form of materials, techniques, or instructional methods. Objectives then may be stated in terms of the parameters of the product to be developed.

Pilot. A pilot project is an exploratory or feasibility study. It may be employed to test new materials or previously tested materials in a new setting. A pilot project may also be used as a "trial run" in planning a more extensive experimental study or for estimating cost, personnel or other needs.

Demonstration. A demonstration project provides the opportunity for illustrating a unique method, material, or technique for others to see in actual practice. It may feature the results of actual previous research or developmental activities.

Exemplary. An exemplary project is one that can serve as an example, pattern, or model. This is not original research but should be based on and reflect the results of previous research and be practical enough to invite

imitation. The purpose of exemplary projects is to assist your people to new and better ways of earning a living and to promote cooperation between public education and potential employers.

Mini-Grant. A Mini-Grant project is an abbreviated project designed for specific purposes. The project may be either developmental or research-related. The Mini-Grant is designed to support administrators, teachers, teacher educators, counselors, and graduate students who would like to try a new idea in vocational-technical education. Primary consideration is given to projects requesting $500.00 or less.

STANDARDS FOR PROJECTS

A research and development project to be supported by federal and state funds must meet the following standards: (1) be research or research-related, (2) show promise of improving education, (3) have general application (not purely local), and (4) be directed toward communicable results.

PLANNING THE PROJECT PROPOSAL

The key to a successful project is thorough planning toward solving a worthwhile problem. Identification of the problem may not be a simple task as it may be obscured by the symptoms. An analysis of objectives and needs should be accomplished in order to define each exact problem.

A listing of topics which are currently considered to be high priority problems could become obsolete almost overnight; therefore, no attempt is made in this publication to itemize specific topics. Rather, attention is directed

to the RCU Circulator and the Tennessee Vo-Tech News and other publications which contain articles of current interest to vocational educators.

The following steps suggest routes to follow in obtaining research assistance and should prove helpful in planning a project.

(1) Place the project idea in writing.

(2) Review published and unpublished research that is related to the project idea. To assist vocational educators in determining what research has been completed and is available, the RCU has implemented a computerized and manual information retrieval service. Requests for this service should be directed to the Information Specialist, Tennessee Research Coordinating Unit, 909 Mountcastle Street, Knoxville, Tennessee, 37916, telephone: 615-974-3338.

(3) Determine sincere interest in the project idea.

(4) The project idea or problem should be stated completely on paper so it may be expanded and fully understood by the researcher. It should answer the following question: "Has a clear ring been drawn around the problem so it is clear what is included and what is left out?"

(5) The decision needs to be made whether to continue developing the project idea and seek additional information and assistance with it.

(6) The regional research and development coordinators are available to assist in planning the project idea. (See inside back cover for the regional office nearest you.) In addition, the RCU can recommend other consultants if needed.

(7) A project proposal should be written. The proposal should present a clear picture as to the intent that the researcher has for the project.

WRITING THE PROJECT PROPOSAL

The project proposal is more than a request for funds. It should describe in a complete and concise manner precisely how the author expects the project to be conducted. The author should bear in mind in the description of the project that, even though the project may have been discussed at length with one or more of the RCU and State Staff, the proposal will be reviewed by others who will be unfamiliar with the verbal description and assurances. The proposal must stand alone as a good representation of the plans and commitments.

It is impractical to try to specify an expected length of a project proposal. This will depend on the scope of the project in terms of objectives and investment. The larger more involved projects will need more description and documentation. An exploration project on the other hand may of necessity be less specific in certain sections.

A suggested proposal format follows. The applicant is expected to make judicious adaptations of this format to accommodate the kind of research and development project he proposes to undertake.

I. Cover Page. This is the first page of a proposal. (See Appendix A)

(a) A concise, descriptive title
(b) Name and address of applicant's organization
(c) Name, position, and telephone number of person initiating proposal
(d) Name, position, and telephone number of person directing the project
(e) Name, position, and telephone number of person committing the applicant's organization to the project
(f) Beginning and ending dates of the project

(g) Total funds requested
(h) Date transmitted to the Regional Research and Development Office

II. Abstract. This is the second page of a proposal. It is a summary of the proposal using the following headings:

(a) Title of project
(b) Principal investigator or project director
(c) Contracting agency or applicant organization
(d) Total funds requested
(e) Proposed beginning and ending dates
(f) A three part summary including:

(1) Objectives -- brief and concise statement of the purposes or objectives of the project

(2) Methodology -- a brief explanation of procedures or description of what is to be done

(3) Contribution to Education -- a brief description of the importance of the project to vocational education

III. Body. The body of the proposal communicates the investigator's plan and its probable effectiveness. Use the following headings to identify the various aspects of the proposed project:

(a) Statement of problem. The statement of the problem establishes the exact plans and objectives for the proposal. It needs to be well phrased and stated to relay concise meaning.

(b) Rationale. The rationale describes the relationship of the problem to vocational education and the need for the problem to be studied. Cite or summarize pertinent material related to the proposed problem. This material may include background information on the problem, pertinent research

related to the problem, and data significant to the problem. Also, the investigator needs to support the particular method of procedure chosen for the project.

(c) Objectives. List the objectives to be achieved, the hypotheses to be tested, products to be developed, or the specific questions to be answered in the project. The objectives should present a clear flow of thought from the statement of the problem and rationale. They should be clear and capable of being attained by the proposed methods.

(d) Methodology. Describe the procedures in detail including the steps to be followed in the orderly progress of the project. The methodology explains the four W's of the problem -- Who, What, When, and Why, and includes How the project will be conducted. When appropriate, provide specific information about each of the following:

(1) Design -- Describe the design for the study and indicate why this design appears particularly appropriate for achieving the stated objectives. There are different types of designs for different research problems. Some of these are experimental, questionnaires, longitudinal study, and case study.

(2) Population and Sample -- Describe the group of subjects from which the sample is to be drawn, the sampling method, and the number of subjects to be chosen. Indicate how experimental and control groups will be selected.

(3) Data and Instrumentation -- Indicate the kinds of data to be gathered and the collection methods to be used. Describe the questionnaires, interview guides, tests, and other instruments to be employed.

(4) Analysis -- Indicate the specific methods of analysis to be used in achieving the objectives, testing the hypotheses, or answering the questions. When several questions are to be answered, it is usually helpful to specify the analysis in relation to each question.

(5) Time Schedule -- In chronological order, indicate the approximate length of time required for each major part of the study.

(e) Contribution to Vocational Education. Describe how the project is important to vocational education today and in the future. A description needs to be given as to the individuals, or groups who would benefit from the project.

(f) Personnel. Personnel will include the name of the investigator and a brief statement of his pertinent experience and unique qualifications. Other required personnel should be described.

IV. Budget. Describe budget on a spearate page (See Appendix B). The budget should show a careful, detailed analysis of project expenses. If project will receive support from other sources, or matching funds, a statement should be included in the budget proposal. The indication that local school funds are being used enhances one's chance of having a proposal funded. Normal reimbursable items for projects are:

(a) Personnel. List all position titles. Identify purpose, cost, and name, and/or qualifications of each person to be used.

(b) Employee Benefits. Summarize benefits such as social security and retirement.

(c) Travel. Indicate fares and/or mileage at allowable rates.

(d) Supplies and materials. An itemized list of project supplies and materials must be included.

(e) Communications. Identify types (postage, telephone, etc.) of communications and cost of each.

(f) Services. Identify purpose and cost of each service, such as duplication, statistical, and testing.

(g) Equipment. An itemized list of equipment to be purchased or rented must be included. (Equipment purchases not ordinarily permitted.)

V. Appendix. The appendix is used for information that if presented in the body of the proposal would only delay the reader with details which could be studied separately. There should be a reference in the body for each separate entry in the appendix. Following is a suggested list of materials that may be presented in the appendix:

(a) Instruments. Include a copy of the questionnaire or interview guide to be used in the project.

(b) Agreement with Cooperating Agencies. When the project is a cooperative one between two or more agencies, an agreement should be included showing evidence of support for the project from all persons and agencies involved.

(c) Methodological Details. Describe long, detailed equations that will be used in analyzing data.

(d) Other Information. Include any information which would enhance the possibilities of approval of the project.

In summary the following outline should be used in preparing the project proposal:

I. Cover Page (See Appendix A)

II. Abstract

III. Body of Proposal

(a) Statement of Problem
(b) Rationale
(c) Objectives
(d) Methodology

1. Design
2. Population and Sample
3. Data and Instrumentation
4. Analysis
5. Time Schedule

(e) Contribution to Vocational Education
(f) Personnel

IV. Budget (See Appendix B)

V. Appendix

(a) Instruments
(b) Agreement with Cooperating Agencies
(c) Methodological Details
(d) Other Information

SELF EVALUATION OF THE PROJECT PROPOSAL

When the project proposal is completed and before it is submitted for appraisal by the Review Committee, it should be critically analyzed by the writer and local administrators. This analysis could save time consuming negotiation or rejection. In analyzing the proposal, the following questions should be answered affirmatively.

1. Is the project proposal a critical question, or problem in vocational-technical education? Not all good proposals can be granted approval due to a limited amount of funds.

2. Is a project necessary to answer the question or problem proposed? If a literature search or resource person can provide the necessary information, the proposed project probably should be abandoned.

3. Does the proposal alone adequately explain the project? The proposal will be reviewed by readers who have nothing more than the written document upon which to base their recommendation. Also, the proposal, as written, is the agreement upon which funding is awarded.

4. Are reasonable research principles and procedures followed? Techniques for sampling and analyzing the data should appropriately reflect the questions

posed by the problem and the generalizations expected to be made from the results.

5. Is the proposal written and planned for a logical and reasonable budget? The review committee is eager to acquire new researchers as long as the project is manageable.

6. Are the requirements of the project such that, if found successful during the trial period, could be reasonably continued in the school or duplicated elsewhere? The number of projects which are dropped after the funding period, even though supposedly operating successfully, is discouraging. Projects which have prohibitive per pupil costs need special justification.

SUBMITTING PROJECT PROPOSAL FOR FUNDING

Proposals will be accepted throughout the year. However, proposals should be submitted approximately two months prior to the anticipated starting date.

In submitting project proposals, follow these specifications:

1. Submit five completed copies of the proposal to the nearest Regional Research and Development Office. (See inside back cover for address of Research and Development Offices.)

2. Be sure the following signatures appear on the proposal cover page:

   a. Person responsible for developing proposal.
   b. Person in charge of proposal.
   c. Full name and position of person committing the applicant's organization to the program.

3. List names, titles, and a brief statement of the qualifications of personnel responsible for developing the project.

4. Indicate any special facilities or resources available to enhance the work on the project.

5. Double-space proposal and type on 8 1/2" X 11" pages. All margins should be at least 1".

6. Staple proposal at the left margin. Do not bind or enclose in folders.

Each person submitting a proposal will be notified in writing whether or not the project will be funded. If the proposal is accepted, the person may be asked to make minor changes. Notification of acceptance or rejection will be given about one month from the date the completed proposal is reviewed.

CONDUCTING THE PROJECT

During the operational phase of the project, a member of the RCU staff will be assigned to monitor the activities of the project. Any proposed procedural changes or questions should be directed to this project officer.

The project director should also be in contact with the state and regional supervisory staff in matters relating to the project. The RCU will assist in this contract. The nature, scope and investment of the project will determine the frequency and involvement of these supervisors. Developmental projects will require more involvement of supervisors, whereas experimental projects will probably require research consultation more frequently.

Minor changes may be permitted in the budget by transfer of funds between items within categories. Requests of this nature, with justification, must be directed to and approved by the RCU staff member assigned to the project. The purpose of any budget modification should be to improve efficiency of the project. In no case may the total funds approved be increased.

Recipients of research grants must submit a final report of the results of the project within 60 days after the completion date. The handbook, "Preparing Research and Development Project Reports for Vocational-Technical Education," should serve as a guide in writing final project reports.

APPENDIX A

COVER PAGE

A PROPOSAL FOR RESEARCH AND/OR DEVELOPMENT ACTIVITIES
SUBMITTED TO THE TENNESSEE RESEARCH COORDINATING UNIT
FOR VOCATIONAL EDUCATION

TITLE OF PROJECT: *(Be concise; avoid technical terms.)*

APPLICANT'S ORGANIZATION: *(Name and address of College or University, School District or other Unit.)*

INITIATED BY:
(Principal Investigator)

_____
(Signature)
(Full name of person responsible for developing the proposal, position, telephone extension, area code, number)

PROJECT DIRECTOR:
(If different from Initiator)

_____
(Signature)
(Full name of person in charge of the program, position, telephone extension, area code, number)

TRANSMITTED BY:

_____
(Signature)
(Full name and position of person committing the applicant's organization to the program, telephone extension, area code, number)

DURATION OF PROJECT: *(Proposed beginning and ending dates.)*

TOTAL FUNDS REQUESTED: $_____

APPENDIX A (CONTINUED)

DATE TRANSMITTED/APPROVED _____/_____

FUNDING: Upon agreement between parties as shown by signatures, $_____ will be paid in lump sum to: *(name of system)*.

Director, Bureau of Educational
Research and Service _____

The University of Tennessee _____

_____

APPENDIX B

BUDGET FORMAT

Initiator _____ Duration of Project _____

Institution _____ Beginning Date _____ Ending Date _____

Project Costs by Line Items

I. DIRECT COSTS	RCU	LOCAL
A. Personnel (List all position titles such as secretary, research assistants, consultants*, etc. State percent of time on program, per annum salary, and beginning and ending dates of employment for each person.)		
B. Employee Benefits (Summarize benefits such as Social Security, retirement, etc.)		
C. Travel (Indicate fares and/or mileage at allowable rates: Number of days per diem* and rate.)		
D. Supplies and Materials 1. Project Materials 2. Office Materials		
E. Communications		
F. Services 1. Duplication 3. Testing 2. Statistical 4. Other		
G. Equipment (where allowable)		
H. Other Direct Costs (List)		
II. TOTAL COSTS		
III. COST SHARING (Give percent)		

*Consultants: Show rate and number of days under Personnel; show transportation and per diem under Travel.

* *

TENNESSEE RESEARCH COORDINATING UNIT STAFF

Knoxville, Tennessee 37916

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* *